

### ABSTRACT OF THE DISCLOSURE

A gearbox is placed between two clock domains to allow data to be transferred from one domain to the other. Although the two domains may operate at the same clock frequency, typically one domain has a faster clock speed than the other. The gearbox is  
5 disposed between the two clock domains to control timing of data transfer from one to the other, by selecting a pattern which identifies when data is made transparent for the transfer. The gearbox allows a number of clock ratios to be selected, so that a particular clock ratio between the two domains may be readily selected in the gearbox for the data transfer.

10